WHAT IS CLAIMED IS:

1. A power supply apparatus comprising:

radio frequency signal oscillating means for oscillating a radio frequency signal;

modulation means for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal oscillating means, and for outputting a pulse signal;

amplifying means for amplifying the radio frequency signal oscillated by said radio frequency signal oscillating means or the pulse signal output from said modulation means; and

transmission means for transmitting the radio frequency signal or pulse signal amplified by said amplifying means, wherein

said amplifying means amplifies the radio frequency signal or pulse signal in a manner that peak power of the radio frequency signal becomes greater than peak power of the pulse signal.

2. The power supply apparatus according to claim 1, wherein the radio frequency signal oscillated from said radio frequency signal oscillating means is an unmodulated continuous wave.

3. A power supply apparatus comprising:

radio frequency signal oscillating means for oscillating a radio frequency signal;

modulation means for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal oscillating means, and for outputting a pulse signal;

amplifying means for amplifying the pulse signal output from said modulation means; and

transmission means for transmitting the pulse signal amplified by said amplifying means, wherein

when said transmission means transmits a pulse signal for power supply, said modulation means increases a duty ratio of the pulse signal, and said amplifying means increases an amplification factor of the pulse signal to increase the peak power of the pulse signal, as compared with a case of transmitting a pulse signal corresponding to transmission data.

4. The power supply apparatus according to claim 3, wherein said modulation means carries out pulse modulation of the radio frequency signal, and outputs the pulse signal for the power supply and the pulse signal corresponding to the transmission data alternately in time.

5. The power supply apparatus according to claim 4, wherein said modulation means outputs the pulse signal for the power supply at every predetermined time interval after the pulse signal for the power supply is transmitted.

6. The power supply apparatus according to claim 3, wherein said modulation means modulates, instead of carrying out the pulse modulation of the radio frequency signal, the radio frequency signal using a digital modulation method of generating a modulation signal whose envelope varies.

7. A power supply apparatus comprising:

radio frequency signal oscillating means for oscillating a radio frequency signal;

modulation means for carrying out pulse modulation of the

radio frequency signal oscillated by said radio frequency signal oscillating means, and for outputting a pulse signal;

first amplifying means for amplifying the pulse signal output from said modulation means;

second amplifying means for amplifying the pulse signal amplified by said first amplifying means; and

transmission means for transmitting the pulse signal amplified by said first amplifying means or the pulse signal amplified by said second amplifying means, wherein

said modulation means makes a duty ratio of the pulse signal greater when said transmission means transmits the pulse signal amplified by said second amplifying means than when said transmission means transmits the pulse signal amplified by said first amplifying means.

8. The power supply apparatus according to claim 7, wherein said modulation means carries out pulse modulation of the radio frequency signal, and outputs a pulse signal for power supply and a pulse signal corresponding to transmission data alternately in time.

9. The power supply apparatus according to claim 8, wherein said modulation means outputs the pulse signal for the power supply at every predetermined time interval after the pulse signal for the power supply is transmitted.

10. The power supply apparatus according to claim 7, wherein said modulation means modulates, instead of carrying out the pulse modulation of the radio frequency signal, the radio frequency signal using a digital modulation method of generating

a modulation signal whose envelope varies.

11. A power supply apparatus comprising:

radio frequency signal oscillating means for oscillating a radio frequency signal;

modulation means for carrying out pulse modulation of the radio frequency signal oscillated by said radio frequency signal oscillating means, and for outputting a pulse signal;

first amplifying means for amplifying the pulse signal output from said modulation means;

second amplifying means for amplifying the pulse signal amplified by said first amplifying means;

transmitting and receiving means for transmitting the pulse signal amplified by said first amplifying means or the pulse signal amplified by said second amplifying means to noncontact wireless communication equipment, and for receiving a pulse signal transmitted from said noncontact wireless communication equipment; and

demodulation means for demodulating the pulse signal received by said transmitting and receiving means, wherein

said modulation means makes, when said transmitting and receiving means transmits the pulse signal amplified by said second amplifying means, a duty ratio of the pulse signal greater than when said transmitting and receiving means transmits the pulse signal amplified by said first amplifying means.

12. The power supply apparatus according to claim 11, wherein

said transmitting and receiving means comprises:

an antenna for transmitting and receiving the pulse signal; and

a circulator for supplying said antenna with the pulse signal amplified by said first or second amplifying means, and for supplying said demodulation means with the pulse signal received by said antenna, and wherein

said power supply apparatus comprises:

a switch that is brought to an OFF state when said circulator supplies said antenna with the pulse signal amplified by said first or second amplifying means, and that is brought to an ON state when said circulator supplies said demodulation means with the pulse signal received by said antenna, said switch being interposed between said circulator and said demodulation means.

13. A power supply method comprising the steps of:

carrying out pulse modulation of a radio frequency signal;

amplifying the pulse signal passing through the pulse modulation or the radio frequency signal; and

transmitting the amplified radio frequency signal or pulse signal, wherein

the radio frequency signal or pulse signal is amplified in a manner that peak power of the radio frequency signal becomes greater than peak power of the pulse signal.

14. The power supply method according to claim 13, wherein the radio frequency signal is an unmodulated continuous wave.

15. A power supply method comprising the steps of:

carrying out pulse modulation of a radio frequency signal;

amplifying the pulse signal passing through the pulse modulation; and

transmitting the amplified pulse signal, wherein

the power supply method makes, when transmitting the pulse signal for the power supply, a duty ratio of the pulse signal greater and an amplification factor of the pulse signal higher to increase the peak power of the pulse signal than when transmitting the pulse signal corresponding to the transmission data.

16. The power supply method according to claim 15 characterized by carrying out the pulse modulation of the radio frequency signal to output the pulse signal for the power supply and the pulse signal corresponding to the transmission data alternately in time.

17. The power supply method according to claim 16 characterized by outputting the pulse signal for the power supply at every predetermined time interval after the pulse signal for the power supply is transmitted.

18. The power supply method according to claim 15 characterized by modulating, instead of carrying out the pulse modulation of the radio frequency signal, the radio frequency signal by using a digital modulation method that generates a modulation signal whose envelope varies.

19. A power supply method comprising:

a modulation step of carrying out pulse modulation of a radio frequency signal, and of outputting a pulse signal;

a first amplifying step of amplifying the pulse signal output in the modulation step; and

a second amplifying step of amplifying the pulse signal amplified in the first amplifying step,

wherein the power supply method transmits the pulse signal amplified in the first amplifying step or the pulse signal amplified in the second amplifying step, and makes a duty ratio of the pulse signal greater when transmitting the pulse signal amplified in the second amplifying step than when transmitting the pulse signal amplified in the first amplifying step.

20. The power supply method according to claim 19 characterized by carrying out the pulse modulation of the radio frequency signal to output the pulse signal for the power supply and the pulse signal corresponding to the transmission data alternately in time.

21. The power supply method according to claim 20 characterized by outputting the pulse signal for the power supply at every predetermined time interval after the pulse signal for the power supply is transmitted.

22. The power supply method according to claim 19 characterized by modulating, instead of carrying out the pulse modulation of the radio frequency signal, the radio frequency signal by using a digital modulation method that generates a modulation signal whose envelope varies.

23. A power supply method comprising:

a modulation step of carrying out pulse modulation of a radio frequency signal, and of outputting a pulse signal;

a first amplifying step of amplifying the pulse signal

output in the modulation step; and

a second amplifying step of amplifying the pulse signal amplified in the first amplifying step,

wherein the power supply method transmits the pulse signal amplified in the first amplifying step or the pulse signal amplified in the second amplifying step to noncontact wireless communication equipment, demodulates, when receiving a pulse signal transmitted from said noncontact wireless communication equipment, the pulse signal, and makes, when transmitting the pulse signal amplified in the second amplifying step, a duty ratio of the pulse signal greater than when transmitting the pulse signal amplified in the first amplifying step.